

=> d his full

```
(FILE 'USPAT' ENTERED AT 07:46:52 ON 28 SEP 1998)
L1      2226 SEA LINKED(W)LIST#
L2      695 SEA (DELET####) (A) (ITEM# OR ENTR### OR RECORD#)
L3      14 SEA L1 (P) L2
L4      0 SEA L1 (P) L2 (P) EXPIR#####
L5      2 SEA L3 AND EXPIR#####
L6      49 SEA EXTERNAL(W)CHAIN?
L7      1 SEA L1 AND L6
L8      366 SEA L1 AND HASH####
L9      30 SEA L1 AND HASH#### AND L2
L10     15 SEA L1 AND HASH#### AND L2 AND EXPIR#####
L11     142 SEA (LINKED(W)LIST#)/TI,AB
L12     977 SEA 707/20?/CCLS
L13     6 SEA L11 AND L12
L14     16 SEA L1 (P) (EXPIR#####)
L15     1509 SEA (REMOV### OR DELET####) (A) (ITEM# OR ENTR### OR RECORD#
)
L16     30 SEA L1 (P) L15
L17     14 SEA L15 (P) EXPIR#####
L18     0 SEA L16 AND L17
```

FILE USPAT

```
* * * * *
*           W E L C O M E   T O   T H E           *
*           U . S .   P A T E N T   T E X T   F I L E           *
* * * * *
```

Search Options:

Search for both singular and plurals: YES
Search for spelling variants : YES
Display intermediate result sets : NO

Num	Search	Hits
#1	collision? W/2 (resol? OR avoid?)	415
#2	#1 AND chain?	6
#3	hash? AND chain?	3
#4	(linked OR pointer) W/2 list?	51
#5	#4 AND chain?	2
#6	#4 AND hash?	1
#7	collision? W/2 (resolution? OR resolv?)	48
#8	#7 AND (hash? OR chain?)	2
#9	#7 AND (linked OR pointer?)	0
#10	collision? AND (linked OR pointer?)	5

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Title: Hash table in massively parallel systems
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Affiliation: Dept. of Comput. Sci., Houston Univ., TX, USA
Conf. Title: Proceedings. Sixth International Parallel Processing Symposium (Cat. No.92TH0419-2)
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Abstract: The authors look at the performance and new collision resolution strategies for hash tables in massively parallel systems. The results show that using a hash table with linear probing yields $O(\log N)$ time performance for handling M accesses by N processors when the load factor of the table is 50%, where N is the size of the hash table. This is better than the performance of using sorted arrays. Two phase hashing gives an average time complexity $O(\log N)$ for M simultaneous accesses to a hash table of size N even when the table has 100% load. Simulation results also show that hypercube hashing significantly outperforms linear probing and double hashing.
(6 Refs.)

Classification: C6120 (File organisation); C5440 (Multiprocessing systems); C4240 (Programming and algorithm theory); C5470 (Performance evaluation and testing)

Thesaurus: Computational complexity; File organisation; Parallel processing; Performance evaluation

Free Terms: Hash table; Simulation results; Massively parallel systems; Performance; Collision resolution; Linear probing; Time complexity; Hypercube hashing; Double hashing
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